

SYSTEM, METHOD AND COMPUTER PROGRAM  
PRODUCT FOR AN IMPROVED PROGRAMMABLE  
VERTEX PROCESSING MODEL WITH INSTRUCTION  
SET

**ABSTRACT**

A system, method and computer program product are provided for branching during programmable processing in a computer graphics pipeline. Initially, data is received. Programmable operations are then performed on the data in order to generate output. Such operations are programmable by a user utilizing instructions from a predetermined instruction set. When performing the programmable operations in the foregoing manner, programmable branching may take place between the programmable operations. Subsequently, the output is stored in memory. Also included is a system, method and computer program product for directly executing a function in the computer graphics pipeline. Initially, input data is received in the computer graphics pipeline. A mathematical function is directly performed on the input data in order to generate output data. It should be noted that the mathematical function is directly performed in the computer graphics pipeline without a texture look-up or aid from a central processing unit. Next, the output data is stored in memory on the computer graphics pipeline.